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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): I434.105.101/IFT976US

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on April 9, 2007

Signature

Typed or printed name Paul P. Kempf

Application Number	Filed
10/806,959	March 23, 2004

First Named Inventor: Jenoe Tihanyi

Art Unit	Examiner
2814	Long Pham

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

- [ ] applicant/inventor.
- [ ] assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)
- [X] attorney or agent of record. Registration number 39,727
- [ ] attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____

Signature

Paul P. Kempf
Typed or printed name

612-767-2505
Telephone number

April 9, 2007
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

[X] *Total of 1 forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Jenoe Tihanyi	Examiner: Long Pham
Serial No.:	10/806,958	Group Art Unit: 2814
Filed:	March 23, 2004	Docket No.: I434.105.101/IFT976US
Title:	LATERAL FIELD-EFFECT-CONTROLLABLE SEMICONDUCTOR FOR RF APPLICATIONS	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Please consider the following remarks during the Pre-Appeal Brief Conference. As these remarks outline a clear legal or factual deficiency in the rejections, Applicant submits that the Pre-Appeal Brief Request for Review is appropriate.

Pre-Appeal Brief Request for Review
Applicant: Jenoe Tihanyi
Serial No.: 10/806,958
Filing Date: March 23, 2004
Docket: 1434.105.101/IFT976US
Title: LATERAL FIELD-EFFECT-CONTROLLABLE SEMICONDUCTOR COMPONENT FOR RF APPLICATIONS

In The Claims

Claims 1-24 read as follows:

1. (Previously Presented) A semiconductor component comprising:

a semiconductor body with a first semiconductor layer of a first conduction type and a second semiconductor layer of a second conduction type, which is applied on the first semiconductor layer and forms a front side of the semiconductor body;

in the second semiconductor layer, a first terminal zone of the second conduction type, a drift zone of the second conduction type, a channel zone of the first conduction type, which is formed between the first terminal zone and the drift zone, and a second terminal zone of the second conduction type, which is arranged at a distance from the channel zone in a lateral direction of the semiconductor body;

a gate electrode arranged in a manner insulated from the semiconductor body and adjacent to the channel zone; and

a plurality of auxiliary electrodes arranged at a distance from one another, and each formed in pillar-type fashion such that each auxiliary electrode has a length and has a cross-section, wherein the dimensions of the auxiliary electrode in the cross section extend in a lateral plane that is perpendicular to the length;

wherein at least one of the plurality of auxiliary electrodes, which, proceeding from the front side, extends through the second semiconductor layer right into the first semiconductor layer and which is insulated from the semiconductor body; and

wherein at least one of the plurality of auxiliary electrodes has no dimension in the lateral plane that extends substantially beyond any other dimension in the lateral plane.

2. (Cancelled)

3. (Cancelled)

4. (Previously Presented) The semiconductor component of claim 2, wherein the plurality of auxiliary electrodes are completely surrounded by an insulation layer in the semiconductor body.

5. (Previously Presented) The semiconductor component of claim 2, wherein the plurality of auxiliary electrodes are connected to a defined potential.

6. (Previously Presented) The semiconductor component of claim 5, wherein the plurality of auxiliary electrodes and the first terminal zone are connected to the same potential.

7. (Previously Presented) The semiconductor component of claim 1, wherein the gate electrode is arranged above the front side of the semiconductor body.

8. (Previously Presented) The semiconductor component of claim 1, wherein the gate electrode is arranged in the semiconductor body.

9. (Original) The semiconductor component of claim 1, wherein the first semiconductor layer has a more heavily doped semiconductor layer of the first conduction type at a side remote from the second semiconductor layer.

10. (Previously Presented) The semiconductor component of claim 1, wherein at least one semiconductor zone of the first conduction type is arranged in the drift zone adjacent to the at least one auxiliary electrode.

11. (Original) The semiconductor component of claim 10, wherein the at least one semiconductor zone is arranged in the region of the front side of the semiconductor body.

12. (Previously Presented) The semiconductor component of claim 1, wherein the at least one auxiliary electrode is arranged nearer to the channel zone than to the second terminal zone.

13. (Previously Presented) A semiconductor component comprising:

a semiconductor body having a first layer of a first conduction type and a second layer of a second conduction type, the second layer applied onto the first layer thereby forming a front side of the semiconductor body;

a first terminal zone of the second conduction type in the second layer;

a drift zone of the second conduction type in the second layer;

a channel zone of the first conduction type formed between the first terminal zone and the drift zone;

a second terminal zone of the second conduction type, wherein the second terminal zone and the channel zone are separated by a distance in a lateral direction on the front side of the semiconductor body;

a gate electrode insulated from the semiconductor body and adjacent the channel zone; and

a plurality of auxiliary electrodes arranged at a distance from one another and each auxiliary electrode formed in pillar-type fashion such that each have a length and each have dimensions in the lateral directions, wherein all of the dimensions in the lateral directions are substantially smaller than the length;

wherein at least one auxiliary electrode extends along its length from the front side through the second layer into the first layer and insulated from the semiconductor body.

14. (Cancelled)

15. (Cancelled)

16. (Previously Presented) The semiconductor component of claim 14, wherein the plurality of auxiliary electrodes are completely surrounded by an insulation layer in the semiconductor body.

17. (Previously Presented) The semiconductor component of claim 14, wherein the plurality of auxiliary electrodes are connected to a defined potential.

18. (Previously Presented) The semiconductor component of claim 17, wherein the plurality of auxiliary electrodes and the first terminal zone are connected to the same potential.

19. (Previously Presented) The semiconductor component of claim 13, wherein the gate electrode is arranged in the semiconductor body.

20. (Original) The semiconductor component of claim 13, wherein the first semiconductor layer has a more heavily doped semiconductor layer of the first conduction type at a side remote from the second semiconductor layer.

21. (Previously Presented) A semiconductor component comprising:

a semiconductor body having a first layer of a first conduction type and a second layer of a second conduction type, the second layer applied onto the first layer thereby forming a front side of the semiconductor body;

a first terminal zone of the second conduction type in the second layer;

a drift zone of the second conduction type in the second layer;

a channel zone of the first conduction type formed between the first terminal zone and the drift zone;

a second terminal zone of the second conduction type, wherein the second terminal zone and the channel zone are separated by a distance in a lateral direction on the front side of the semiconductor body;

a gate electrode insulated from the semiconductor body and adjacent the channel zone; and

a plurality of auxiliary electrodes arranged at a distance from one another and each configured in a substantially cylindrical shape;

wherein at least one auxiliary electrode extends from the front side through the second layer into the first layer and insulated from the semiconductor body.

22. (Previously Presented) The semiconductor component of claim 21, wherein each of the plurality of auxiliary electrodes have a substantially circular cross-section.

23. (Previously Presented) The semiconductor component of claim 1, wherein each of the plurality of auxiliary electrodes are configured in a cylindrical shape.

24. (Previously Presented) The semiconductor component of claim 13, wherein each of the plurality of auxiliary electrodes are configured in a cylindrical shape.

Pre-Appeal Brief Request for Review
Applicant: Jenoe Tihanyi
Serial No.: 10/806,058
Filing Date: March 23, 2004
Docket: I434.105.101/IFT976US
Title: LATERAL FIELD-EFFECT-CONTROLLABLE SEMICONDUCTOR COMPONENT FOR RF APPLICATIONS

Claim Rejections under 35 U.S.C. § 102

The Examiner rejected claims 1, 4, 5, 6, 7, 12, 13, 16, 17, and 18 under 35 U.S.C. § 102(b) as being anticipated by the Yasuhara et al. EP Patent No. 1073123.

In previous amendments and responses, Applicant initially amended claims 1 and 13 to include a plurality of auxiliary electrodes arranged at a distance from one another and formed in ***pillar-type*** fashion. Applicant does not believe that the Yasuhara et al reference anticipates this pillar-type feature, and instead, at most, would illustrate only plate-type structures.

After multiple discussions with the Examiner on this issue, Applicant submitted a further clarifying amendment with respect to how the pillar-type feature distinguishes over the art of record. Specifically, claim 1 now specifies, *inter alia*, a plurality of auxiliary electrodes arranged at a distance from one another, and each formed in pillar-type fashion such that ***each*** auxiliary electrode has a length and has a cross-section. The dimensions of the auxiliary electrode in the cross section extend in a lateral plane that is perpendicular to the length. Furthermore, for at least one of the plurality of auxiliary electrodes, there is ***no dimension in the lateral plane that extends substantially beyond any other dimension in the lateral plane***.

As such, the claims as amended now quite clearly indicate that the ***pillar-type*** feature specified in the claims is not taught or suggested by the ***plate-type*** structures in the Yasuhara et al reference, where the film 14 that has one dimension in the lateral direction (L) that is substantially larger than another dimension (w) in the lateral direction. In fact, the plate-type structures taught in the Yasuhara reference is exactly contrary to the claim that specifies that there is no dimension in the lateral plane that extends substantially beyond any other dimension in the lateral plane.

Similarly, claim 13 now specifies, *inter alia*, a plurality of auxiliary electrodes arranged at a distance from one another and each auxiliary electrode formed in pillar-type fashion. ***Each*** electrode has a length and each has dimensions in the lateral directions. ***All of the dimensions in the lateral directions are substantially smaller than the length.*** Again, it is now quite clear that the pillar-type feature specified in the claims is not taught or suggested by the plate-type structures in the Yasuhara et al reference, where the film 14 that has one

dimension in the lateral direction (L) that is substantially larger than another dimension (w) in the lateral direction and larger than the "length" (which is the vertical dimension of film 14 illustrated in Figure 2).

Also, added claim 21 specifies, *inter alia*, a plurality of auxiliary electrodes arranged at a distance from one another and each configured in a ***substantially cylindrical shape.*** As such, it is quite clear that the ***cylindrical shape*** specified in the claims is not taught or suggested by the ***plate-type*** structures in the Yasuhara et al reference, where the film 14 that has one dimension in the lateral direction (L) that is substantially larger than another dimension (w) in the lateral direction such that a cylinder structure is not taught or suggested.

Furthermore, the plate-shaped "electrodes" (film 14) of the Yasuhara et al. reference serve for lowering the resistance of the drift region of the semiconductor component (see abstract), while the auxiliary electrodes of the invention serve to reduce the gate-drain-capacitance of the semiconductor component (see page 10, line 14, to page 11, line 2). Thus, the auxiliary electrodes of the present invention and of the Yasuhara et al. reference not only have significant geometrical differences but also have completely different functions.

Therefore, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 102(b) rejection to claims 1, 4, 5, 6, 7, 12, 13, 16, 17, and 18, and request allowance of these claims.

Claim Rejections under 35 U.S.C. §103

The Examiner rejected claims 8, 10, 19, 9, 11, 20, 23, and 24 under 35 U.S.C. § 103 for being unpatentable over the Yasuhara et al. EP. Patent No. 1073123 in view of Gajda et al. U.S. Publication No..2003/004255, and Omura et al., EP Patent No. 1168455.

Since each of these claims depend from claims 1 and 13, which are believed to be allowable as discussed above, they too are in allowable form. Therefore, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection to claims 8, 9, 10, 11, 19, and 20, and request allowance of these claims.

Pre-Appeal Brief Request for Review
Applicant: Jenoe Tihanyi
Serial No.: 10/806,958
Filing Date: March 23, 2004
Docket: H34.105.101/IFT976US
Title: LATERAL FIELD-EFFECT-CONTROLLABLE SEMICONDUCTOR COMPONENT FOR RF APPLICATIONS

Therefore, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103 rejection to claims 8, 10, 19, 9, 11, 20, 23, and 24, and request allowance of these claims.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1, 4-13 and 16-24 are all in a condition for allowance and requests reconsideration of the application and allowance of all pending claims.

Any inquiry regarding this Request should be directed to Paul P. Kempf at Telephone No. (612) 767-2502, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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100 South Fifth Street
Minneapolis, MN 55402

Respectfully submitted,

Jenoe Tihanyi,

By his attorneys,

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Date: April 9, 2007
PPK:dmw

Paul P. Kempf
Reg. No. 39,727

CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (571) 273-8300 on this 9th day of April, 2007.

By
Name: Paul P. Kempf